

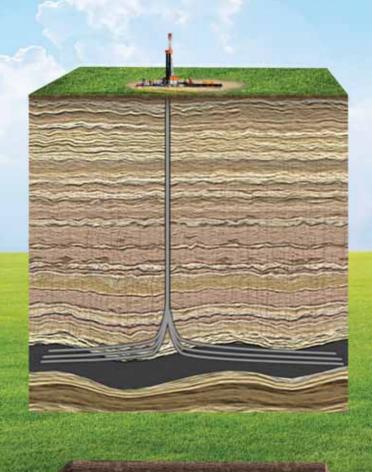
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IN THIS ISSUE

Regular Features: From the President......5 NOGS Officers / Contacts6 Upcoming Events & Activities7 NOGS Luncheon Presentation9 January & February Calendars......12 NOGS Memorial Foundation......29 Special Features: NOGA News......13 Supersaurus Saturday Call for Volunteers19

NOGS Committee News......18

Membership Renewal21 NOGS Election of Officers Announcement24

on the cover:

Cover Photo Submitted by: Cyril Lobo

Culebra (Gaillard) Cut — Panama Canal, Panama

The terraced walls of the Culebra Cut, formerly called Gaillard Cut, can be viewed during a cruise down the Panama Canal. This is the only man-made valley where ships can sail across the continental divide at an astonishing 85 feet above sea level. Excavation of the Culebra Ridge was initiated by the French (including de Lesseps of Suez Canal fame) in 1881 but ceased due to high costs, landslides, and disease. US engineers, including Major Gaillard, took over the operation in 1904, resulting in the opening of the Panama Canal in 1914. Rocks along the 8-mile Culebra Cut consist of a complex series of pyroclastics and sedimentary strata of Tertiary age with igneous flows and instrusives. Many landslides occurred during the construction and operation of the Panama Canal causing intermittent closures over its lifetime.

From the Editor

Happy New Year NOGS members! I can't believe the holidays have already come and gone. I hope everyone who went to the Christmas Holiday Party had a good time. It certainly was a festive event and I had a great time seeing everyone there.

In this issue of NOGS LOG we are looking back on 2013 with another photo collage of the GCAGS Convention and preparing for our future. Our nominating committee is hard at work recruiting candidates for office for the May election. If you would like to discuss opportunities to serve NOGS, please contact Ed Picou. Mike Fein has submitted a very interesting article about the Deepwater Technical Symposium and his efforts to improve this event for the geoscience community. His goals can be met but he is seeking help from NOGS members.

As we enter 2014 we have several upcoming Society events in which member participation is greatly appreciated. Supersaurus Saturday, our annual volunteer event with the Louisiana Children's Museum, will be held on March 29. Since my three-year-old son loves dinosaurs, I know he and many other children will thoroughly enjoy this exciting event made possible, in part, by NOGS volunteers. If you would like to help with this event please contact Tom Bergeon. Lastly, the NOGS Golf Tournament will be held on Monday, April 28 at Money Hill in Abita Springs. This event supports the Bill Craig Memorial Fund which provides funding for local earth science teachers and is a great way to spend the day whether you're a golfer or a volunteer.

It's a new year; please consider taking an active role in our Society.

Sheri Richardson - *NOGS LOG* Editor

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Happy New Year!

January is the start of the NFL Playoffs. Unfortunately, the Saints were clobbered by the Seattle Seahawks, 34-7, on Monday, December 2. Then the Saints had to play the eight-game win streak Carolina Panthers, who they play twice in the last four games. Thankfully, on Sunday, December 8, the 49er's beat the Seahawks (yay!) and the Saints took care of the Carolina Panthers in convincing fashion, 31-13. The Saints are now tied with the Seahawks for the NFC lead; however, it's still going to be a mighty rough road for the Saints to get a bye, let alone home-field advantage.

It was great seeing everyone at our annual Christmas Holiday Party that was held on December 7 at the Holiday Inn. I hope all those in attendance had a great time. The food was delicious and plentiful and the music was enjoyable. On behalf of the Society, I want to personally thank ION Geophysical for sponsoring the bar and to Mary Walther for organizing the party details.

UPCOMING EVENTS

January 6 is the date for our monthly meeting and Dr. Martin Cassidy from the University of Houston will present "CO2 as a Free Gas in the Subsurface, Source and Worldwide Occurrences: Bravo Dome CO2 Field, NM as a Type Example."

Here in New Orleans just when we finish one holiday, we start another; there is no downtime. This time it's Christmas and Carnival. January 6 is the Feast of the Epiphany, often known as Twelfth Night in New Orleans, and is the last day of the Christmas season...but around here, it is the first day of Carnival, a time of king cakes, debutante balls, and parades. This year's Carnival Season is going to be a long one, 8 weeks until the big day on March 4, so pace yourself my friends.

Chuck

NOGS Office

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Phone: 504-561-8980 • Email: info@nogs.org • Website: www.nogs.org The office is located at 810 Union Street, Suite 300, New Orleans, LA 70112. Correspondence and all luncheon reservations should be sent to the above address.



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UPGOMING Events & Activities



January 6 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation.

CO2 as a Free Gas in the Subsurface, Source and Worldwide Occurrences: Bravo Dome CO₂ Field, NM as a Type Example

Guest Speaker:

Dr. Martin Cassidy

University of Houston • Houston, Texas See page 9 for Abstract and Biography

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January 26-28 GCSSEPM Bob F. Perkins Research Conference OMNI Hotel • Houston, TX For more information, www.gcssepm.org

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February 3 NOGS Luncheon

Holiday Inn Superdome • New Orleans, LA For more information, www.nogs.org

February 27

PLANO Executive Night

Hilton Riverside • New Orleans, LA For more information, www.planoweb.org

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January 6 NOGS Luncheon Presentation

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CO₂ as a Free Gas in the Subsurface, Source and Worldwide Occurrences: Bravo Dome CO₂ Field, NM as a Type Example



Presented by

Dr. Martin M. Cassidy

Department of Earth and Atmospheric Sciences
University of Housotn
Houston, Texas

ABSTRACT

Deposits of CO₂-rich gas (>50%) are present worldwide but in limited areas. Found during drilling for oil and gas, they can be an expensive nuisance or an economic resource.

A search was made for data about CO₂-rich deposits worldwide to determine their tectonic setting and gas composition. Such deposits are often located near ultramafic basaltic volcanism in areas of tectonic extension including continental rifts (Western USA), areas of tectonic escape (Pannonian Basin, Hungary), back arc basins (Indonesia), extensional cross trends in foreland basins (La Barge Platform, Wyoming, USA), and plate bounding strike-slip faults (Natuna D Alpha, Indonesia, and San Andreas, California, USA).

Isotopic ratios of carbon in CO₂ and of helium 3He/4He compared to the ratio in air (Ra) aid in determining the possible source of CO₂ gas. A detailed study was made of a typical CO₂ deposit, Bravo Dome Field, New Mexico. That field contained about 283 billion cubic meters, 10 trillion cubic feet, of 99% CO₂. Gases from 14 wells spread across the Bravo Dome Field were sampled with great care and revealed a dynamic gas deposit in which noble gases contents varied systematically across the field.

The western portion of the field, far above the gas-water contact, has noble gas content similar to those in mid-ocean ridge basalts (MORB). To the east, near the gas-water contact, the CO₂ has higher noble gas concentrations because atmospheric and crustal CO₂ entered the CO₂ from the water.

The CO₂ of Bravo Dome Field is clearly of magmatic origin as shown by the 3He/4He/Ra as high as 4.26 Ra, the high CO₂ /3He, the delta 13C values of 8.8 % SMOW in the west to 21.6 % SMOW in the east, and by the relationships of noble gas concentrations.

It is concluded that in general, CO₂ deposits in sedimentary rocks are usually sourced from the mantle. Fractures in the crust in areas of extension allow basic magmas to rise. CO₂ is expelled from the magma and enters the first porous reservoir that the gas encounters in the sedimentary section. Where adequate traps and seals are present, it forms CO₂ deposits. CO₂ is unrelated to hydrocarbons migrating separately and at different times.

The relation of CO₂ to basic igneous rocks that intrude sedimentary section containing seals and reservoirs, such as those at Bravo Dome and Jackson Dome area, provides a model that can be used in exploration for new CO₂ deposits.

BIOGRAPHY

Martin M. Cassidy is a Research Scientist at the University of Houston from which he received a Ph. D. in 2005 after he retired from Amoco Production Company after 34 years working in exploration and production geology.

His first seven years were spent in Corpus Christi, Texas, and then Houston working exploration in South Texas. In 1969 he moved to Pan American Libya Oil Company (Amoco) as a chief geologist. Returning to the head office in Chicago, he worked worldwide new ventures including those in the Middle East, Indonesia, Thailand, the Philippines, and other countries of the Far East. In 1982 Martin was posted to Amoco UK as chief production geologist and two years later was promoted to Exploration Manager of Amoco UK, which included responsibility for the UK portion of the North Sea. These positions included responsibility for extensive reservoir evaluation of Amoco operated fields. In 1986 he returned to Amoco Production domestic in New Orleans for a year and a half as technical advisor in the Gulf of Mexico. But he soon returned to Amoco International in Houston as project leader for Indonesia, then project leader of basin analysis across North Africa and southern Europe.

Retiring in 1994 from Amoco (later to be BP) he embarked on a study of CO2 in the subsurface and completed a dissertation about regional distribution of free CO2 gas in the subsurface worldwide, along with a detailed study of the Bravo Dome, New Mexico, CO2 gas field. Since then he has consulted about CO2 and participated in academic and industry studies, including those about Residual Oil Zones in the Permian Basin of west Texas. He has participated with others in publications about CO2 and noble gases in the Western USA, and given presentations at AAPG Conferences and local geological societies about CO2, sedimentation in sub-aerial basins below sea level, and oil sourced from coals in Indonesia

Dr. Cassidy is active in the American Association of Petroleum Geologists (AAPG), in which he serves as a delegate, and a recipient of a Distinguished Service Award. He is a certified Petroleum Geologist of the AAPG, and active in the Houston Geological Society, a society of some 3,000 members, of which he was president for 2012-2013.

THE LUNCHEON RESERVATION DEADLINE IS JANUARY 2 - CONTACT THE NOGS OFFICE

"And Looking Ahead . . . "

The next luncheon will be held on February 3, 2014. Our guest speaker and presentation were not available at press time. Contact the NOGS office at 561-8980 or use the PayPal link on the NOGS website (www.nogs.org) to make your reservation.

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January							
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
			1 New Year's Day	2	3	4	
5	6 NOGS Luncheon Holiday Inn 11:30 AM	7	8	9	10	11	
12	13	14	NOGS Board Meeting	16	17	18	
19	20 Martin Luther King, Jr. Day	21	22	23	24	25	
26	27	28	29	30	31		
	Foundation - Bob F Conference - Hous						

February							
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
						1	
Super Bowl Sunday	3 NOGS Luncheon Holiday Inn	4	5	6	7	8	
	11:30 AM	NAPE Expo - Houston, TX					
9	10	11	NOGA Luncheon Porter & Luke Restaurant	13	14 Valentine's Day	15	
16	17 President's Day	18	NOGS Board Meeting	20	21	22	
23	24	25	26	PLANO Executive Night	28		

-New Orleans Geological Auxiliary News-

"The objective of the Auxiliary is to promote fellowship among the wives of the members of the New Orleans Geological Society and to render assistance to NOGS upon request."

The Auxiliary celebrated a beautiful fall day on November 13th with a trip to Ormond Plantation in Destrehan for a delicious lunch, a chance to see the house, and of course, to visit the gift shop. Alma Dunlap's guest



Suzanne Friloux holds "St. Charles Parish, Louisiana: A Pictorial History" and Alma Dunlap holds a copy of "Plantations by the River" with information about Father Joseph M. Paret whose landscape watercolors of the area were done before the Civil War.

Suzanne Friloux, co-author of "St. Charles Parish, Louisiana: A Pictorial History," talked to us before the luncheon about the history of Ormond plantation. The plantation home was built in 1790 and is one of the oldest French West Indies Creole style plantation houses along the Mississippi River. The original tract of land reached from the Mississippi River to Lake Pontchartrain. Richard Butler, Earl of Ormond, purchased the plantation after the War of 1812 and named it for his family home in Ireland. In the mid-twentieth century Mr. & Mrs. Alfred Brown, of Brown's Velvet ice Cream, did an extensive restoration of the buildings. More details of the history of the plantation and the river area of St. Charles Parish can be found in Ms. Friloux's beautiful book which is available in the gift shop. We were very fortunate to

have Ms. Friloux share some regional information with us.

Thirty-five Auxiliary members and guests attended the luncheon, including two new members. We are glad to have Jerri Cullinan rejoining the group and welcomed Margie Conatser as a new member. Everyone received a rose from Jack Langford in memory of his wife Beverly, a long-time member of the Auxiliary.



Suzie Baker and Jean Jones were responsible for planning the lovely day.

It is not too late to join the Auxiliary and participate in our spring activities. Our next event will be a luncheon at Porter & Luke's Restaurant on Wednesday, February 12, 2014. Mary Ellis Hasseltine and Pat Williamson are planning another enjoyable day for us.

Peggy Rogers, NOGS LOG

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Alexander M. Breaux is currently a Graduate Student at Tulane University pursuing his MS degree in earth and environmental sciences where he also received his BS (2012) in geology. His research focuses on analyzing the hydrodynamics of the Mississippi River by examining associated sedimentological and coastal geologic processes which will enhance his understanding of the stratigraphy of the Mississippi Delta. Alexander is interested in the AAPG Student Chapter and NGNO Committees of NOGS and is a student member of AAPG and AGU.

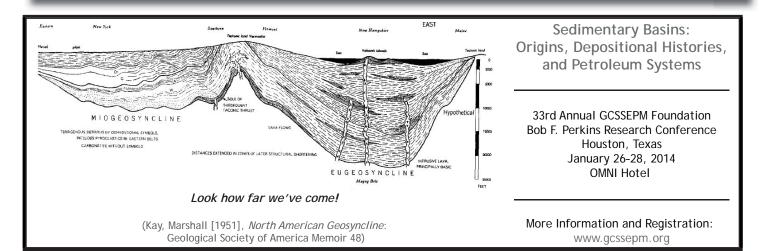
Caroline A. Broderick is a Geologic Assistant with Kimbrell & Associates in Baton Rouge, Louisiana. She received her BS (2011) in geology from College of Charleston and is working on her MS in geology at Louisiana State University (expected 2015).

Thomas E. Ewing is President of Frontera Exploration Consultants in San Antonio, Texas. He holds a BS (1975) in geology from Colorado College, an MS (1977) in geochemistry from New Mexico Institute of Mining and Technology, and a PhD (1981) in geology from the University of British Columbia. He is an active member of AAPG, AIPG, and GSA.

James W. Kimbrell is a Geologist with Kimbrell & Associates in Baton Rouge, LA. He received his BS in geology from Tennessee Technological University in 2008. He is a member of GSA, AAPG, AIPG, BRGS, and MBRPG.

William Clay Kimbrell is a Petroleum Engineer with Kimbrell & Associates in Baton Rouge, LA. He earned his BS (1981) in geology, BS (1984) in petroleum engineering, and MS (2002) in petroleum engineering from Louisiana State University. He is a member of AIPG and ASME.

William H. Schramm is a Geologist III with the Louisiana Department of Environmental Quality in Baton Rouge and also an Adjunct Instructor at the University of Louisiana at Lafayette. He received his BA (1976) in geology from University of Wisconsin-Milwaukee and an MS (1984) in geology from ULL (formerly USL). He is an active member of AAPG and both the Baton Rouge and Lafayette Geological Societies. Bill presented "Salt Dome Storage and Brine Production Facilities: Geological, Environmental, and Safety Issues" with his colleague, Dutch Donlon, at the August 5th NOGS luncheon.









COMMITTEE NEWS

Boy Scouts/Girl Scouts Committee:

A Chairman is needed.

This committee promotes and supports the Scouting movement and assists in all matters pertaining to geology, including the Geology Merit Badge Program. If you're interested, please contact Bill Whiting at Bootscon@aol. com or info@nogs.org. If there are any Eagle Scouts looking to assist in this worthy cause, it would be greatly appreciated.

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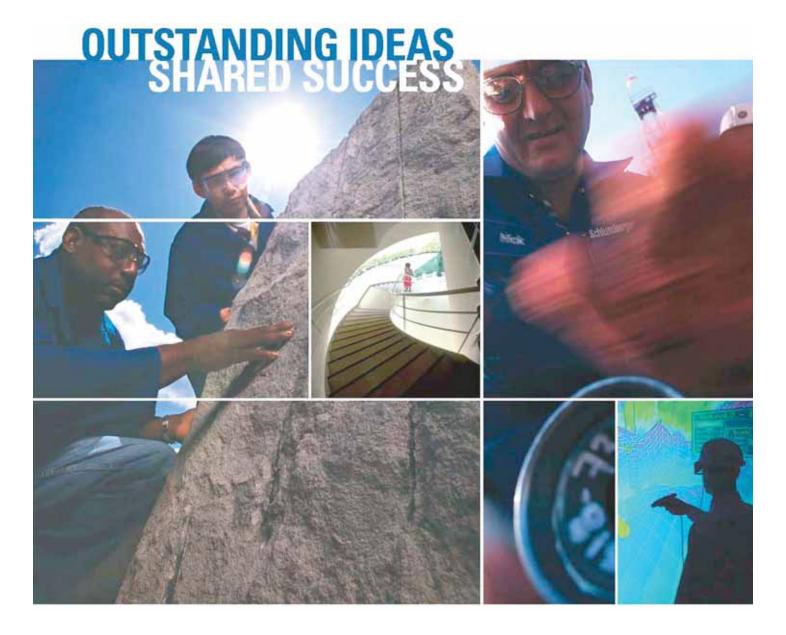
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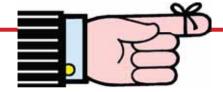
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South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA By Carlo C. Christina

During the month of November 2013 the Office of Conservation, Lafayette District, Onshore Area, issued only 18 permits to drill. Following are the most significant and interesting locations:

NEW LOCATIONS

In Cameron Parish, **Grand Chenier Field**, (A), Brammer Engineering will drill the #1 Miller Estate, a Planulina test, to 15,200 feet. The well is located in Sec. 35, 14S-5W, 1 mile northwest of nearest production, the #1 Sturlese, which was completed in April 2012. It has produced more than 80,000 barrels of oil and 457,000 million cubic feet of gas. (247202)

Pennington Operating Co. will drill in East Baton Rouge Parish in **University Field**, (B), in Sec. 41, 8S-1W. The #1 LSU Board of Supervisors will be drilled to 11,505 feet to test a series of Nonion struma sands which are productive in the field, approximately 2 miles to the north.

University Field, a very old field, was discovered in 1938 with 217 wells drilled in the field to date. Cumulative oil production is estimated to be more than 50 million barrels of oil. Only 4 wells are currently producing less than 75 barrels per day. (247262)

Goodrich Petroleum will drill a Tuscaloosa Marine Shale horizontal well in **Little Silver Creek Field,** (C), in Tangipahoa Parish in Sec. 33, 1S-8E. The TMS #1 Blades 33 H will be drilled to a depth of 19,500 feet in a 6,300 foot lateral leg. It is located 5 miles southeast of the nearest TMS production, the #1 Thomas 38 H, which was completed in September 2012 and has produced 60,800 barrels of oil in 12 months. (247207)

The proposed location is also located 2 miles west of the Texas Pacific #1 Blades. This well was completed in 1978 in the vertical hole of the Tuscaloosa Marine shale through the perforations 11,072 to 11,644 feet, overall. The well has produced more than 24,000 barrels of oil, and thirty-five years later, it is still producing oil from this interval.

Kirk Barrell, President of Amelia Resources, recently summarized the TMS activity over the past 3 years stating that approximately 1.7 million acres have been leased, at an average of \$200 per acre, or \$340 million of income to mineral owners. Thirty-four wells have been drilled, with the estimated total of \$544 million spent by the operators, with service companies as benefactors. For a complete review of the TMS activity by Kirk Barrell, visit www.tuscaloosatrend.blogspot.com.

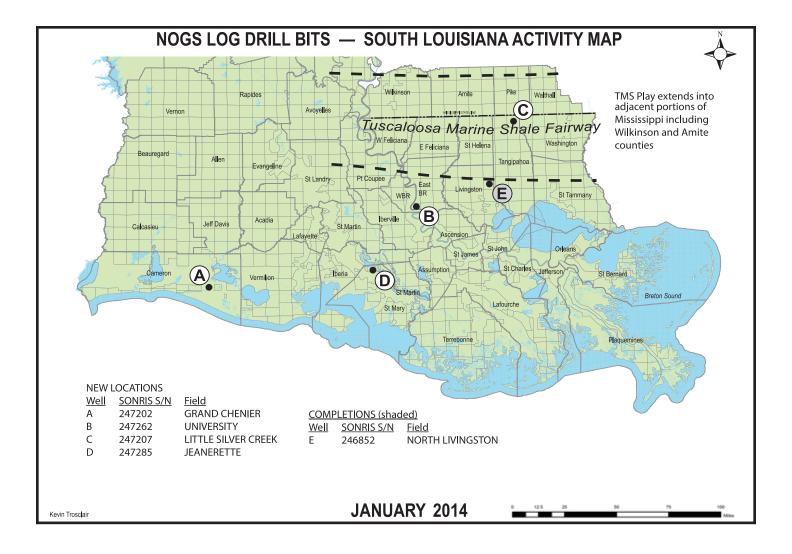
In St. Mary Parish, **Jeanerette Field**, (D), Interstate Explorations will drill to 14,000 feet in Sec. 33, 13S-9E. The #1 Adeline Sugars is located on the east flank of the field, approximately 1 mile northeast of shallow production at 8,500 feet. (247285)

COMPLETIONS

The Scout report of the Office of Conservation, (SONRIS), Lafayette District, Onshore Area, filed very few completions through November 27. It should be noted that 52 wells are currently "waiting on completion rigs."

In Livingston Parish, **North Livingston Field**, (E), Lake Ronel Oil Co. has completed its #1 Hutchinson as an oil well in the Wilcox sand flowing 120 BOPD through perforations 9,600 to 9,612 feet. As reported in the October *NOGS LOG*, the well is located in Sec. 30, 6S-6E, 1 mile southeast of a recent Wilcox discovery. (246852)





OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During November 2013, the BOEM approved **73** Gulf of Mexico drilling permits. Of these, **34** were for shelf wells, and **39** were for deepwater wells. Only **9 new well permits** were issued including **5 shelf** (2 exploratory and 3 development) and **4 deepwater** (2 exploratory and 2 development) **permits**.

On the shelf, two exploratory new well permits were granted to Walter Oil & Gas for their #1 wells on High Island A-469 and Vermilion 45. The development well permits were awarded to three operators. EnVen Energy Ventures received a permit for their South Marsh Island 166 #A-7 well. Arena Offshore obtained a new well permit for their Eugene Island 314 #C-14 well, and Chevron was awarded a permit for their Eugene Island 360 #C-19 well.

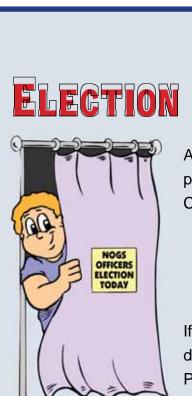
In deepwater, permitting activity was done for four operators. Anadarko Petroleum was awarded a permit to drill their East Breaks 646 #11 exploration well. Repsol E&P USA was granted a permit for their Keathley Canyon 642 #SS-1 exploration well. BHP Billiton obtained a permit for their Green Canyon 653 #SB-103 development well. BP Exploration & Production received a new well permit to drill their Mississippi Canyon 776 #7 development well.

On November 27th, IHS-Petrodata reported that the Gulf of Mexico mobile offshore rig supply stood at **107.** The marketed rig supply consisted of **81** rigs, of which **77** were under contract. The contracted versus total rig supply utilization rate is **75.7%**, while the marketed contracted versus marketed supply utilization rate stands at **95.1%**.

These figures reflect an increase of 1 rig each as to those reported last month. They also compare to 83 out of the 107 rigs that were available during November 2012, for a 77.6% fleet utilization rate.

On October 29th, the BakerHughes Rig Counts indicated that there were 57 active mobile offshore rigs in the Gulf, which is 74% of the rigs under contract mentioned above. This active rigs number is three less than reported last month. During the week of November 15th, there were 53 rigs operating in offshore Louisiana, 2 rigs in offshore Texas, and 2 rigs in offshore Florida. The current active rigs count compares to 50 active rigs during the same period last year, representing a 14.0% increase in yearly activity.

On November 26th, the **BOEM** published the final statistics for **OCS Sale 233**, which was held on August 28, 2013. The BOEM reported that it had accepted **51** bids out of **53** bids submitted at the lease sale. A total of **2** bids were deemed insufficient and subsequently rejected. The rejected bids were for **Alaminos Canyon Blocks 258** and **260**. The bids were submitted by **Maersk GOM**, who bid \$1,106,183 for each tract. The BOEM placed a mean range of value (MROV) of \$7,000,000 for Block 258 and \$5,200,000 for Block 260.



NGS

GTION OF OFFICERS FOR 2014-2015

According to the Bylaws of the Society, a slate of officer nominees is to be presented at the March luncheon meeting. Consequently, the Nominating Committee will be contacting prospective candidates in the near future.

Officer positions include:

Director 2017, President-elect, Vice President, Secretary, Treasurer and Editor-elect.

If you are interested in serving the Society as an officer and would like to discuss the responsibilities associated with each office, please contact Ed Picou at epicou@bellsouth.net or at 504-529-5155.



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17th Annual Gulf of Mexico

Dee Dylater Technical Symposium

On August 21st and 22nd of this past year, the Deepwater Technical Symposium was held at the New Orleans Hilton Riverside. SPE, AADE, and NOGS all contributed time and effort toward building this event as the premier Deepwater Gulf of Mexico technical event.

As you can see from the following graphs, both profit and attendance have increased steadily since 2008. DWS is returning significant dollars back to NOGS, which supports the Memorial Foundation for scholarships and towards NOGS' growth in general. However, substantial changes need to be made. In 2013 only a half-dozen or so NOGS members were involved on the planning committee

and too few of all attendees were geoscientists. We need to get more <u>geoscientists</u> involved to make this event appeal to more <u>geoscientists</u>.

This year the symposium will be held August 5th through 7th.

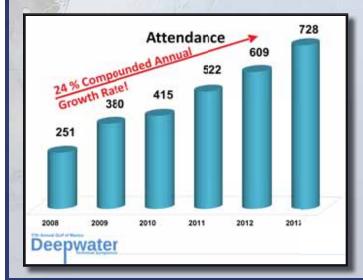
We want to continue the momentum from this growth. The growth must come from Geoscience. The people need to come from NOGS. Toward that, I have proposed a three-phase plan designed to boost geoscientist attendance at the symposium. First and foremost, is attracting an entire day's worth of <u>quality</u> deepwater geoscience presentations. The committee in charge of that is very capably headed by Bob Meltz. If YOU have seen a quality presentation or have a topic that would fit with the DWS, please let him know.

The second phase of geoscience growth is in the exhibits and the sponsorship area. There were virtually none of either in the exhibit hall or the sponsor list for this past symposium. That needs to change. I need a strong leader who can discuss how the papers in our geoscience sessions will attract enough of us to make their investment in our symposium, by their presence in the exhibit hall, and their sponsorship of the event, worthwhile.

The third phase is creating a signature event for NOGS on August 5th, the day before the symposium itself. Is this event a seminar? Is it a prospect show? We need a NOGS member who is not afraid to think outside the box to make this event a reality. Are you that person? Please contact any Board member to discuss your idea.

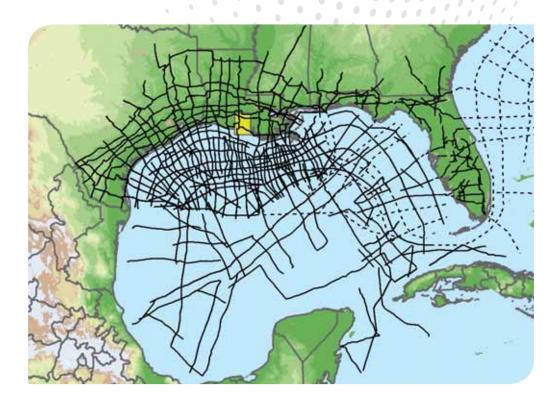
I believe this plan can significantly increase growth of the Deepwater Symposium, thus helping NOGS' growth as well. Please volunteer or say YES when we call.

Mike Fein





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Submitted by Sheri Richardson

Fuelfix.com - Jennifer A. Dlouhy

"Feds push back timeline for offshore drilling rules." November 18, 2013 at 1:38 pm

http://fuelfix.com/blog/2013/11/18/feds-push-back-timeline-for-offshore-drilling-rules/?cmpid=businesshcat

The federal government is no longer on track to propose new rules for Arctic oil development and offshore emergency equipment before the end of the year.

The head of the Bureau of Safety and Environmental Enforcement conceded that the two proposals will not be ready until 2014 and blamed the 16-day government shutdown for some of the delay.

One of the proposed regulations has been in the works since the 2010 Deepwater Horizon disaster revealed shortcomings in the blowout preventers that are used as a final emergency safeguard against uncontrolled oil and gas flows.

The hulking devices sit atop wells and can be activated in an emergency to cut drill pipe and block off the hole, trapping oil and gas inside. But a forensic investigation of the blowout preventer used at BP's failed Macondo well concluded that a powerful rush of oil and gas caused drill pipe to buckle and shift, ultimately preventing powerful shearing rams on the device from cutting the pipe and sealing the hole.

Although blowout preventer manufacturers are testing new designs and selling stronger shearing rams meant to slash through thick pipe connections and any debris, a new federal rule likely would give those voluntary changes the force of law. Separately, Mississippi's oil and gas regulators also are considering a proposal to tighten the state's standards for blowout preventers.

Beyond the BOP rule, regulators at the safety bureau have been drafting a formal proposal of minimum standards for oil and gas activity in U.S. Arctic waters, partly with an eye on codifying some of the voluntary steps that Shell took during its 2012 drilling in the area.

Federal regulators previously have said both measures would be unveiled by the end of this year.

Salerno said the bureau is finalizing language in the proposals now, but the measures will not be available until 2014.

Oil & Gas Journal (OGJ.com) - Paula Dittrick

"BP posts gulf environmental data online; plans more for 2014." November 18, 2013

http://www.ogj.com/articles/2013/11/bp-posts-gulf-environmental-data-online-plans-more-for-2014.html

Information about offshore water conditions in the Gulf of Mexico was posted online, BP PLC reported, saying that BP, federal and state agencies, and the Natural Resource Damage Assessment (NRDA) collected the information following the deepwater Macondo well blowout in 2010.

The data, made available on BP's web site Nov. 18, previously helped guide oil spill response efforts under the direction of the US Coast Guard.

Initial information concerns water chemistry and concentrations of chemical constituents of crude oil, such as volatile hydrocarbons, polycyclic aromatic hydrocarbons, saturated hydrocarbons, and petroleum biomarkers.

The oil characteristics outline the composition of Macondo oil as it progressed through degradation offshore. Oil also was collected using a containment system that conveyed fresh oil from the well into a pipe connected to a containment vessel.

Sample maps provide a visual representation of the location where samples were collected. Work plans describe the scientific studies developed to examine possible oil exposure pathways. NRDA developed and amended more than 200 work plans in total to study natural resources and habitat.

BP plans to post additional information online next year as part of its ongoing efforts to share scientific information with the public and the research community, including progress reports regarding NRDA efforts.

"Providing access to this significant body of scientific information will help enhance gulf-related scientific research and improve the public's understanding of the condition of the gulf," said Laura Folse, BP's executive vice-president for response and environmental restoration.

Information scheduled for release next year will include the results of various ongoing scientific sampling by government agencies. That sampling now is in various stages of analysis, validation, and quality control review.

Data to be released will cover oil, water, sediments, shoreline, environmental toxicology, birds, fish and shellfish, marine mammals, and sea turtles. The information will be posted without interpretation, BP said.



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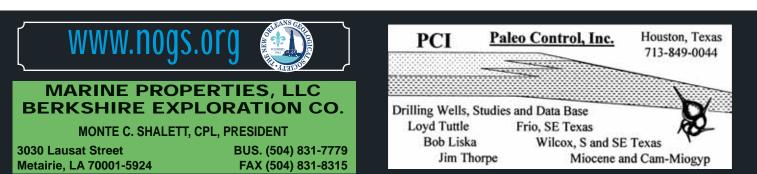
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